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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,956	12/03/2004	Takeshi Koyama	396.4449 X00	8624
20457 7590 04/29/2008 ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-3873				
EXAMINER				
WOOD, ELLEN S				
ART UNIT		PAPER NUMBER		
1794				
MAIL DATE		DELIVERY MODE		
04/29/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/516,956

**Applicant(s)**

KOYAMA ET AL.

**Examiner**

ELLEN S. WOOD

**Art Unit**

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-14 and 16-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-14 and 16-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-5, 5-14, and 16-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Carlblom (US 5,637,365).

In regards to claim 1, Carlblom discloses resins having gas barrier properties (col. 1 9-10). The resins are used as barrier coatings for packaging material and/or containers (col. 1 lines 10-12). The gas barrier layer is an adduct of polyamine monomer and a polyepoxide to form a polyamine-polyepoxide polymer (col. 5 lines 66-67), this is considered to one of ordinary skill in the art an epoxy resin. The preferred epoxy curing agents are those that contain the skeletal structure of the instant applicant (col. 8 lines 53-56). The skeletal structure comprises at least 64% of the curing agent (col. 8 lines 65-67). The gas-barrier layer has an oxygen permeability of less than 0.60 cc-mil/100 in<sup>2</sup>/atm./day measured at 30°C and relative humidity up to 75% (col. 14 lines 34-38).

In regards to claims 3-5, Carlblom discloses that the epoxy resin contains at least one resin selected from the group consisting of glycidyl ether moieties derived from xylylenediamine (col. 6 lines 52-53) and/or resorcinol (col. 7 lines 63-64) and diglycidyl ethers of bisphenol F may be used (col. 9 lines 9-12).

In regards to claims 5-7, Carlbom discloses that the preferred curing agents are those which the combinations of xylylenediamine, a polyfunctional compound having at least one acyl group, and a monocarboxylic acid (col. 8 lines 60-64).

In regards to claim 8, Carlbom discloses that the barrier materials can be applied as either solvent or aqueous-based thermosetting coating compositions onto other polymeric materials to form packaging materials such as containers (col. 12 lines 32-37).

In regards to claim 9, Carlbom discloses that the polymeric material is a polyolefin (col. 12 lines 14-16) or PET (col. 12 lines 58-59).

In regards to claim 10, Carlbom discloses that the polymeric material and the barrier materials can be formed into packaging materials by lamination or extrusion techniques, thus it is inherent that the polymer layers are heat sealable. Also, polyolefins and PET are both known in the art as excellent heat-sealable polymers.

In regards to claim 11, Carlbom discloses that the active hydrogen to the epoxy groups is 1.5 (col. 8 lines 31-32).

In regards to claim 13, Carlbom discloses that the barrier material comprises at least one layer of the container, thus have a surface area of 100% (col. 12 lines 4-10). The containers are ideally suited for packaging of food, beverages, medicines, and like substances (col. 12 lines 37-40), thus it is inherent that the containers are hollow in order for contents to be packaged.

In regards to claim 14, Carlbom discloses that the polymeric material is a polyolefin (col. 12 lines 14-16) or PET (col. 12 lines 58-59).

In regards to claims 12 and 16-17, Carlblom discloses that the preferred curing agents are those which the combinations of xylylenediamine, a polyfunctional compound having at least one acyl group, and a monocarboxylic acid, where the unreacted xylylenediamine is removed (col. 8 lines 60-64).

In regards to claims 18-19, Carlblom discloses that the barrier material comprises at least one layer of the container, thus have a surface area of 100% (col. 12 lines 4-10). The containers are ideally suited for packaging of food, beverages, medicines, and like substances (col. 12 lines 37-40), thus it is inherent that the containers are hollow in order for contents to be packaged.

In regards to claim 20-21, Carlblom discloses that the skeletal structure comprises at least 64% of the curing agent (col. 8 lines 65-67).

In regards to claim 22, Carlblom discloses that the epoxy resin contains a phenylene or naphthylene component (col. 7 lines 40-60).

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELLEN S. WOOD whose telephone number is (571)270-3450. The examiner can normally be reached on Monday-Friday 7-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ellen S Wood  
Examiner  
Art Unit 1794

/Carol Chaney/  
Supervisory Patent Examiner, Art Unit 1794